

ABSTRACT OF THE INVENTION

An apparatus for delivery of biologically active materials comprises a catheter and balloon having micro-needles or pores. In the apparatus, the balloon can have a polymer coating containing the biologically active material, and the apparatus can include a sheath surrounding the balloon. In one embodiment the biologically active material is delivered through lumens in the micro-needles. Another embodiment of the invention is an apparatus for delivery of biologically active materials comprising a catheter with a balloon disposed thereon and a shockwave generator for producing a shockwave for delivering the biologically active material to a body lumen. Methods for delivery of biologically active materials are also disclosed.